

AGRICULTURAL EFFICIENCY

PRESENTATION 2/NOVEMBER 9, 2011

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THE PROBLEM

Improving
agricultural
efficiency in
San Pablo

MEANS TO A SOLUTION

Provide a product

Promote an education

Create a service

**Promote a
lifestyle change**

SAN PABLO SURVEY

Time on the farm - Tiempo en la granja

Which months out of the year do you farm? - Cuales meses del año trabaja en la granja?

- ☐ January - Enero
- ☐ February - Febrero
- ☐ March - Marzo
- ☐ April - Abril
- ☐ May - Mayo
- ☐ June - Junio
- ☐ July - Julio
- ☐ August - Agosto
- ☐ September - Septiembre
- ☐ October - Octubre
- ☐ November - Noviembre
- ☐ December - Diciembre

On average, how many days a week is work done on the farm? - Por medio, cuantas días cada semana haba trabajo en la granja?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7

On average, how many hours per day is work done on the farm? - Por medio, cuantas horas cada día haba trabajo en la granja?

- ☐ 1-2
- ☐ 3-4
- ☐ 4-5
- ☐ 6-7
- ☐ 8-9
- ☐ 10+

Which operations are performed by hand on your farm? - Cuales operaciones hace con la mano en su granja?

- ☐ Tilling - Labranza
- ☐ Watering - Riego
- ☐ Spraying pesticides - Rociando pesticidas
- ☐ Pulling Weeds - Malezas tirando
- ☐ Adding fertilizer - La adición de fertilizante
- ☐ Harvesting - Cosecha
- ☐ Planting - plantación
- ☐ Other - Otro

- Spraying pesticides is a time consuming and laborious process
- Farmers work 4–5 hrs/day, 7days/week
- Families consume 60–70% of their crops

THE PROBLEM STATEMENT

- Agriculture in San Pablo is a laborious practice. As a result, farmers choose shortcut solutions to their problems at the cost of health and profit.
- Our goal is to investigate integrated pest management (IPM) as an alternative solution, as well as a means to disseminate the knowledge appropriately.

“IPM” YOU ASK?

- An ecosystem-based strategy that focuses on a long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties.

PUBLISHED RESEARCH

2010 UN
Report

US IPM
Initiative

Google Ad

Related
Projects

- Industrial farming will not be sufficient to satisfy the world's food needs
- An efficient, widely available, and sustainable method of production is needed
- Small scale farming and agroecology is the best approach
- Clinton's 1999 IPM Initiative called for 75% of US crop acreage to integrate IPM

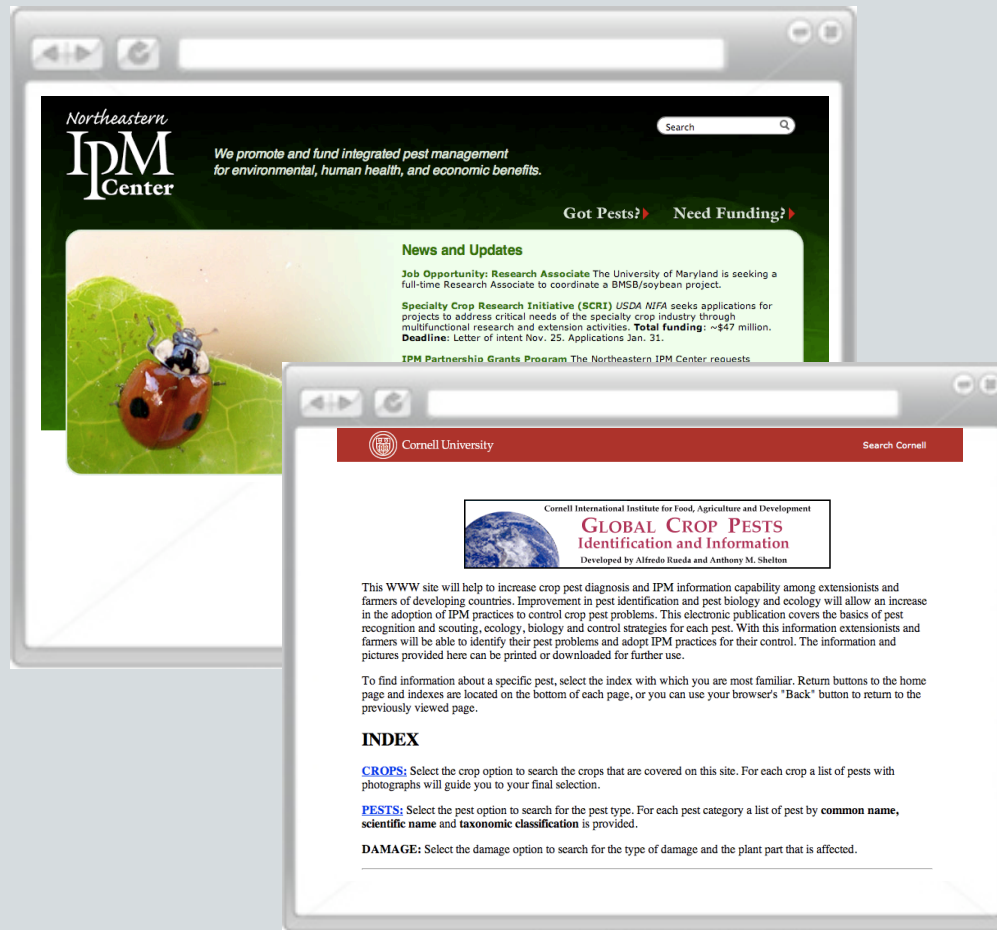
**2010
UNITED
NATIONS
REPORT**
slashfood.com

**UNITED
STATES IPM
INITIATIVE**
un.com



- Kenyan man experiences pests/ants
- Uses the internet to find a solution
- He posts the solution to a bulletin board for others to view and learn

GOOGLE AD
[youtube.com](https://www.youtube.com)



- Global Crop Pests Database (cornell.edu)
- IPM Center Database (northeastipm.org)

RELATED
PROJECTS

THE SITUATION

COMMON PLANTS IN SAN PABLO & GUATEMALA



- Potatoes
- Roses
- Tomatoes
- Corn
- Bananas
- Sugarcane
- Coffee
- Beans
- Cardamom
- Melon

(CIA Factbook, Personal experience)

COMMON PESTICIDES USED IN SAN PABLO & GUATEMALA



- DDT
 - Monocrotophos
 - Methyl Bromide
 - Lime Sulfer
 - Atrazine
- (TED case study)

DECISION MATRIX

Means to disseminate IPM knowledge:

- Manual
- Seminars
- Traditional Education
- Guateca Education
- Website
- Message board
- Word of mouth
- Specialist

DECISION MATRIX

Took into consideration:

- Cost
- Availability
- Accuracy
- Personal ownership
- Ease of use
- Time commitment
- Spreadability
- Acceptability
- Updateability

DECISION MATRIX RESULTS

Word of Mouth (92%)

Physical Message Board (82%)

Website (77%)

Guateca Education (77%)

METHOD OF DISSEMINATION

Guateca education
and website



Publish to a physical
message board



Sharing through
word of mouth

THE NEXT STEPS

UNIV 391/
FALL 2011

GUATECA/
SUMMER
2012

FUTURE

UNIV 391/FALL 2011

- Research IPM solutions
- Create a website
- Publish researched solutions
- Pass the torch

GUATECA/SUMMER 2012

- Utilize organic ag curriculum/hired specialist (Toby?) to research specific IPM solutions in a collaborative manner
- Publish solutions to website
- Construct a physical message board
- Set up an “IPM computer” in internet cafe

TO INFINITY AND BEYOND!

- Locals continue to access website and utilize message board
- Students take on role as local IPM researchers and specialists
- IPM knowledge becomes common practice in San Pablo

QUESTIONS

Comments
Critiques
Compliments
Crying
Clapping